	Application No.	Applicant(s)
Notice of Allowability	09/751,659	MARTIN, BRIAN JAMES
	Examiner	Art Unit	
	Kenneth Tang	2195	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to *1/17/06*.

2. ☒ The allowed claim(s) is/are *5-6, 8-16, 18-25, 27-31, 33, 35-38, 40-41 and 43; now renumbered as 1-32*.

3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some*   c) ☐ None of the:

        1. ☐ Certified copies of the priority documents have been received.

        2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

        3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

    * Certified copies not received: _____ .

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.

5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.

    (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached

        1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____ .

    (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of

        Paper No./Mail Date _____ .

    Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).

6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)

2. ☒ Notice of Draftperson's Patent Drawing Review (PTO-948)

3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____

4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application (PTO-152)

6. ☒ Interview Summary (PTO-413), Paper No./Mail Date *3/17/06* .

7. ☒ Examiner's Amendment/Comment

8. ☐ Examiner's Statement of Reasons for Allowance

9. ☐ Other _____ .

SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

1.   An examiner's amendment to the record appears below. Should the changes and/or

additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the

payment of the issue fee.

2.   Authorization for this examiner's amendment was given in a telephone interview with

George Chaclas on 3/17/06.

3.   The application has been amended as follows:

**In the Specification, replace the paragraph of page 12, lines 20-24 through page 13,
lines 1-4 with the following:**

A computer readable medium shall be understood to mean any article of manufacture that

contains data that can be read by a computer or a carrier wave signal carrying data that can be

read by a computer. Such computer readable media includes but is not limited to computer

storage media, transmission media, and paper computer media. Computer storage media

includes but is not limited to magnetic media such as a floppy disk, a flexible disk, a hard disk,

reel-to-reel tape, cartridge tape, cassette tape or cards; optical media such as CD-ROM and

writeable compact disc; magneto-optical media in disc, tape or card form; paper computer media,

such as punched cards and paper tape; or transmission media from a carrier wave signal received

through a network, wireless network or modem, including radio-frequency signals and infrared

signals.

In the claims:

- Claims 1-4 (canceled)

- Claim 7 (canceled)

- Replace claim 15 with the following:

15. A parallel dispatch waiting signaling method for updating a dispatcher database of an

operating system for a multiprocessor computing system, the method comprising the steps of:

defining one or more dispatch groups, each dispatch group including dispatchable

objects, made up of any of threads, resources or events that are temporally and spatially related;

defining one or more local locks, one for each dispatch group;

relating each dispatchable object to its corresponding dispatch group;

determining if the dispatchable object of an updating operation belongs to a dispatch

group;

acquiring one of the one or more local locks, thereby locking a portion of the dispatcher

database corresponding to the dispatch group;

updating the dispatcher database portion; and

releasing the local lock following updating,

wherein in the case where said determining determines that the dispatchable object of the

updating operation does not belong to a dispatch group, then further comprising the steps of:

acquiring all locks thereby locking the dispatcher database;

updating the dispatcher database; and

releasing all locks following updating.

- **Claim 17 (canceled)**

- **Replace claim 18 with the following:**

18. The method according to claim 15, wherein all locks being acquired includes all local locks

and a global lock.

- **Replace claim 25 with the following:**

25. An operating system for execution in computer system including a plurality of processors,

the operating system including program code, the program code including a sequence of

instructions and criteria for protecting and updating data items of a dispatcher database, said

sequence of instructions and criteria including

defining one or more dispatch groups, each dispatch group including dispatchable object,

made up of any of threads, resources or events that are in a temporal locality;

defining one or more local locks, one for each dispatch group;

relating each dispatchable object to its corresponding dispatch group;

determining if the dispatchable object of an updating operation belongs to a dispatch

group;

acquiring one of the one or more local locks to thereby lock a portion of the dispatcher

database corresponding to the dispatch group;

updating one or more data items of the locked dispatcher database portion; and

releasing the local lock following updating,

wherein said sequence of instructions and criteria concerning relating each dispatchable object to

its corresponding dispatch group includes separately identifying each dispatch group with a

unique identifier; and identifying each dispatchable object of each group with said unique

identifier; and wherein said sequence of instructions and criteria concerning acquiring one of the

one or more local locks includes acquiring the one of the one or more local locks for the dispatch

group corresponding to the unique identifier.

- **Claim 26 (canceled)**

- **Replace claim 30 with the following:**

30. A computer program product comprising:

program code, stored on computer storage media, for protecting and updating data items

of a dispatcher database of an operating system of a multi-processor computer system, the

program code including:

a first computer-readable program code segment for causing the computer system to:

(a) define one or more dispatch groups, each dispatch group including dispatchable

objects, made up of any of threads, resources or events that are in a temporal locality and a

spatial locality;

(b) define one or more local locks, one for each dispatch group; and

(c) relate each dispatchable object to its corresponding dispatch group;

(d) separately identify each dispatch group with a unique identifier; and

(e) identify each dispatchable object of each group with said unique identifier;

a second computer-readable program code segment for causing the computer system to:
(f) determine if the dispatchable object of an updating operation belongs to a dispatch

group; and

a third computer-readable code segment for causing the computer system to:

(g) acquire one of the one or more local locks to thereby lock a portion of the dispatcher

database corresponding to the dispatch group; and

(h) acquire the one of the one or more local locks for the dispatch group corresponding to

the unique identifier.

- · **Claim 32 (canceled)**

- **Replace claim 33 with the following:**

33. The computer program product of claim 30 wherein:

the first code segment includes instructions and criteria to:

separately identify each dispatch group with a unique identifier, and

identify each dispatchable object of each group with said unique identifier; and

the second code segment includes instructions and criteria to determine if the

disapatchable object belongs to the dispatch group using the unique identifier.

- **Claim 34 (canceled)**

- **Replace claim 35 with the following:**

35. The computer program product of claim 30, wherein the third code segment includes instructions and criteria that, while acquiring the one of the one or more local locks, other portions of the dispatcher database are to be unlocked.

- **Replace claim 36 with the following:**

36. The computer program product of claim 30 further including a fourth computer-readable code segment for causing the computer system to:

     (f) update one or more data items of the locked dispatcher database portion; and

     (g) release the acquired local lock following updating.

- **Claim 39 (canceled)**

- **Replace claim 40 with the following:**

40. A multiprocessor computer system comprising:

     a plurality of processors;

     a physical memory accessed and used by the plurality of processors;

     program code for execution within the plurality of processors; and

     wherein the program code comprises criteria and a sequence of instructions to

protect and update data items of a dispatcher database, said instructions and criteria including:

defining one or more dispatch groups, each dispatch group including dispatchable object, made up of any of threads, resources or events that are in a temporal locality and a spatial locality;

defining one or more local locks, one for each dispatch group;

relating each dispatchable object to its corresponding dispatch group;

determining if the dispatchable object of an updating operation belongs to a dispatch group;

acquiring one of the one or more local locks to thereby lock a portion of the dispatcher database corresponding to the dispatch group;

updating one or more data items of the locked dispatcher database portion; and

releasing the local lock following updating

wherein in the case where the program code criteria and sequence of instructions for determining determines that the dispatchable object of the updating operation does not belong to a dispatch group, the program code criteria and sequence of instructions includes:

acquiring all locks thereby locking the dispatcher database;

updating the dispatcher database; and

releasing all locks following updating.

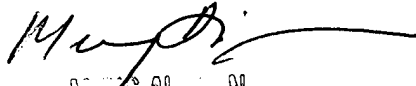
- **Claim 42 (canceled)**

Conclusion

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Kenneth Tang whose telephone number is (571) 272-3772. The

examiner can normally be reached on 8:30AM - 6:00PM, Every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

· Information regarding the status of an application may be obtained from the Patent

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER